CAPTIONS FOR COLOR FIGURES

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1. BELTON ET AL.
2. CARLSON-atm
3. CARLSON-surf
4. INGERSOLL ET AL.

Figure 1. Mosaic of features in Jupiter's atmosphere at the time of the Ganymede 7 encounter. The coverage stretches from 10 to 50 degrees N and has a spatial resolution of about 14 km/pixel. Three mosaics of near-infrared images, each showing the same features but at different positions on the planetary disc, are rendered in false color. Images at 756, 727, and 889 nanometers are displayed together as red, green, and blue. Light blue clouds are high and thin, red are deep, and white clouds are high and optically thick. The major SSI objective at Jupiter is to determine the vertical cloud structure and dynamics of individual features in the atmosphere. This objective will be met by combining images of a feature taken in several spectral passbands, at several viewing geometries as shown here, and by time-lapse coverage of the region of interest.

Figure 2. Image of the auroral arc in Jupiter's northern hemisphere, taken on the Ganymede 7 orbit. The red, green, and blue colors correspond to images taken using the red, green, and clear filters. The data shows that the brightness of the auroral emissions are almost independent of wavelength and therefore that more than the excitation of hydrogen atoms must be involved in this phenomena.

Figure 3. Hotspots and Io-glow seen on Io while eclipsed by Jupiter. The colors in this picture represent the intensity of the emissions. Blue corresponds to low and red corresponds to high intensity. Emissions that are related to Io's plume-dominated SO₂ atmosphere are seen at the equatorial and southern polar limbs. Bright spots on the surface are volcanic hotspots, some with temperatures approaching 1800 K. Note the cluster of hotspots to the right near the sub-Jupiter point.

Figure 4. Galileo color map of the surface of Io. The first of three such maps scheduled to be constructed from a mosaic of images. This map is made from data taken using the violet, green, and 756-nanometer filters during the Ganymede 1 and 2 orbits. Comparison of these moderate-resolution (variable but greater than 2.6 km/pixel) maps shows where volcanic resurfacing has occurred. These kinds of data are also used to determine the photometric properties of regions of the surface through the comparison of images taken under different viewing conditions.

Figure 5. Tyre Macula on the surface of Europa (34N, 146W). This 140-km diameter impact scar is seen with a resolution of about 600 m/pixel. Originally detected in low-resolution Voyager images, its nature was a mystery until this Galileo image became available. The red, green, and blue colors represent images taken at three near-infrared wavelengths. This picture was taken during the Ganymede 7 orbit.

Figure 9. The east ansa of Jupiter's main ring (top) and halo as seen by Galileo. Color denotes the relative intensity of light scattered from the ring halo. Radial structures associated with the satellite Metis are clearly seen in the main ring. Jupiter is casting its shadow on the ring.

Figure 1. A portion of the complete global mosaic obtained by NIMS during the second orbit around Jupiter (G2). From left to right the wavelengths are 1.61, 2.17, 2.73, 3.01, and 4.99 μm . The different wavelengths that were used probe the atmosphere from the high troposphere down to the ~ 6 -bar level. The color composite shows escaping thermal emission (red), the cloud layers (green), and higher altitude features (blue). Areas showing both thermal emission and high altitude reflection appear purple. (JPL P-48454).

Figure 4. Maps of a Jovian hotspot. The spectra for each point have been analyzed for water relative humidity, ammonia concentration, and cloud transmission, which are shown along with the brightness at 4.8 μm . Note the extreme variations in water content, for which we have used only the signals with high brightness. The amount of ammonia also varies significantly, and in a manner different than for water. The locations of the spectra shown in Fig. 3 are indicated in the upper left panel.

Figure 4. Spatial distribution of the 4.25- μm feature in the Asgard region of Callisto. The Tornarsuk crater (upper right) shows an enhancement, as does the Asgard palimpsest region (left).

Figure 1. Comparison of a 5-micron image of Jupiter (left) with a Voyager 1 image recorded 1 hour later on January 10, 1979 (Fig. 3 of Terrile and Beebe 1979; p-90957).

Figure 6. False-color mosaic of the Great Red Spot designed to show the heights and thicknesses of the clouds. High, thin clouds appear blue. High, thick clouds appear white. Intermediate clouds appear yellow, and deep clouds appear red (Fig. 1 of Vasavada et al. 1997).

Figure 8. True-color (top) and false-color (bottom) views of a 5-micron hotspot. Colors in the lower image have the same interpretation as in Fig. 6 (Fig. 3 of Vasavada et al. 1997; p-48698).

Figure 9. Wind patterns around the 5-micron hotspot shown in Fig. 8 (Fig. 9 of Vasavada et al. 1997).

Figure 10. True-color (top) and false-color (bottom) images of two “classic” anticyclonic white ovals (middle left and right). A smaller anticyclonic oval is visible at lower right. The region between the two large ovals is cyclonic (Fig. 4 of Vasavada et al. 1997; p-48952).

Figure 11. Color view of Jupiter's aurora on the night side. The green background is light from the day side that entered the camera by off-axis scattering (Fig. 2 of Ingersoll et al. 1997; p-48699).